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February 1, 2000
FINAL

Mr. Dale Hatfield
Chief, Office of Engineering and Technology
Federal Communications Commission
2000 M Street NW, Suite 480
Washington, DC 20554

Dear Mr. Hatfield:

As required by Part 63.100(a) of the Commissions Rules, AT&T hereby files its Final Service Disruption Report for an AT&T network outage.

1. DATE / INCIDENT LOCATION TIME:

January 10, 2000 09:25 AM PST

2. GEOGRAPHICAL AREA AFFECTED:

Oxnard, CA

3. CUSTOMERS AFFECTED (APPROXIMATELY):

48,723 (based on blocked calls)

4. TYPES OF SERVICES AFFECTED:

Toll Access and Toll Completing

5. DURATION OF OUTAGE:

2 hours

6. BLOCKED CALLS:

146,168

7A. CAUSE OF INCIDENT:

An Alcatel DCS3/1 equipment failure in Oxnard, CA resulted from a defect attributed to the generic R7 system software that causes circuit pack failures to occur without proper protection switches.

Intermittent alarms were occurring on both Clock Distribution Board (CDB) circuit packs on shelf 7 indicating a momentary trouble. However, when these alarms reoccurred three times within a fifteen-minute period, a trouble ticket was opened to initialize investigation even though there was no service impact at this time.

Nearly one hour later, all DS1 service failed on shelf 7. The master CDB had failed and service was not automatically transferred to the standby CDB because of the protection switch malfunction. Due to the silent nature of this failure mode, neither the Transport Service Center (TSC) nor the Subject Matter Expert (SME) was aware of the loss of service.

7B. EQUIPMENT NAME / TYPE:

Alcatel DCS3/1

7C. PART OF NETWORK:

Oxnard, CA – Oxnard, CA

8. RESTORATION METHODS:

When the SME received notification of the service impact, Alcatel Technical Support was immediately contacted to direct procedures for service restoration. Alcatel advised AT&T to remove all service from the failed master CDB pack via a software command, and then replace the defective CDB pack. When the failed pack was replaced, it was further determined that the spare pack was also defective. All service was restored when another pack was installed, tested and service was switched back to the equipment.

9. STEPS TO PREVENT REOCCURRENCE:

- Alcatel's generic R8 system software corrects the protection switch defect. Deployment of R8 is in progress, with an expected completion time of 05/2000. The Oxnard, CA DCS3/1 is scheduled to be upgraded to generic R8 by 01/28/2000.

- Failures of this type cause the loss of DS1 service, with no DS3 indications to the TSC. Typically, the TSC must be notified by an outside agency that a service affecting condition exists. Therefore, AT&T will provide awareness training and better information to the work centers on the potential service impact of the Alcatel

R7 software and management of clock system alarms.

- AT&T will implement changes to the existing Alarm Reference Guide for circuit pack
  fault isolation alarms, relevant in R8 systems as well as R7 systems.

- AT&T will continue to exercise on-going proactive maintenance for detection of potential service affecting hardware problems in the Alcatel DCS3/1 systems.

- As a result of this outage, AT&T has lowered the alarm threshold for pack replacement to a single alert, in concurrence with Alcatel.

10. APPLICABLE BEST PRACTICES:

AT&T has reviewed the Network Reliability: A Report to the Nation, June 1993, and has evaluated all best practices in SECTION D: DIGITAL CROSS-CONNECT SYSTEMS. In support of the following references, AT&T will continue to partner with Alcatel in the interim as mentioned above in Steps to Prevent Reoccurrence until release of the Alcatel R8 software.

- **Section 6.3.2.5 – Testing In Service Provider Environment**
  When the service provider finds critical failures in the field after deployment of new software or hardware, it indicates that the supplier did insufficient testing or did not fully understand the service provider's application. To mitigate the probability of these difficulties, the service provider and supplier should team up to understand what each wants or is providing, decide where there may be conflicts in need and capability, and to fully explore the service provider environment.
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- **Section 6.4.1 Hardware – Matrix, Controller and Disk Drive Failures**
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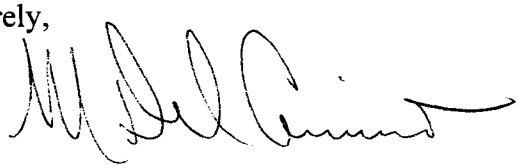
  a. Recommendation to all equipment suppliers that they critically review the level of inspection and surveillance on critical DCS components (i.e. matrix cards, bridging cards, sync cards, disk drives, and controllers) and do aggressive root cause analyses of all field failures.
  b. Recommendation to all service providers to have sufficient spares of critical DCS components readily available to minimize downtime.

Sincerely,



This form should be sent for the following timeframes:
B/C 90,000 – 149,999 3 days
B/C 150,000 & greater 120 minutes

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AT&T
Initial Service Disruption Report

FAX TO: FCC WATCH OFFICE, WASHINGTON, DC

202-632-6975 Voice
202-418-2812 FAX

ALTERNATE FCC WATCH OFFICER

202-418-2813 FAX

1.	Date/Time of Incident	1-10-00 09:25 PST
2.	Geographic area affected	Southern California
3.	Customers affected (est)	30K +
4.	Types of service affected	Toll Connect Toll Access
5.	Duration of outage	2 Hours and 5 minutes
6.	Blocked calls (est)	90K +
7a	Cause of inicident	Hardware Trouble
7b	Equipment name/types	DCS3-1 Alcatel
7c	Part of network affected	OXNARD, CA.
8.	Restoration methods used	N/A
9.	Steps to prevent recurrences	N/A

AT&T contact person: **Mike DelCasino**
Telephone number: **202-457-2023**
Date/Time of report: